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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,731	11/11/2003	Michael Collier	005127.00307	5000
22910 7590 01/30/2007 BANNER & WITCOFF, LTD. 28 STATE STREET 28th FLOOR BOSTON, MA 02109-9601			EXAMINER LARSON, JUSTIN MATTHEW	
			ART UNIT 3782	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/30/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/705,731

Applicant(s)

COLLIER ET AL.

Examiner

Justin M. Larson

Art Unit

3782

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 7, 8, 19-21, 24 and 26 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 23 is/are allowed.
- 6) ☒ Claim(s) 1-4, 9-15, 22, 25, 27 is/are rejected.
- 7) ☒ Claim(s) 5, 6 and 16-18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 1 is objected to because of the following informalities: In line 11, the claim read "transverse chambers **is is** disposed..." Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 25 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Sebastian (US 5,728,055 A).

Regarding claim 25, Sebastian discloses a bladder comprising, in combination, at least one longitudinal chamber and a plurality of transverse chambers, each transverse chamber being connected at a first end thereof to at least one longitudinal chamber, being in fluid communication with the at least one longitudinal chamber and each other transverse chamber, and having a longitudinal axis extending substantially parallel to the longitudinal axis of the other transverse chambers and at an acute angle with respect to a longitudinal axis of the bladder. The initial statement of intended use and all other functional implications have been carefully considered but are deemed not to impose any patentably distinguishing structure over that disclosed by Sebastian which is capable of being used in the intended manner, i.e., the bladder being used with a

strap to carry a load. There is no structure in Sebastian that would prohibit such functional intended use (see MPEP 2111).

Regarding claim 27, Sebastians's bladder further includes a belt (52) attached thereto, where the belt is tightened about a user and causes the bladder to twist or bend around the user's body. Examiner is considering the belt of Sebastian to be equivalent to the claimed means since it provides a twist in the bladder.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seven S.P.A (WO 02/47510 A1) in view of Mizen (EP 0 898 906 A2).

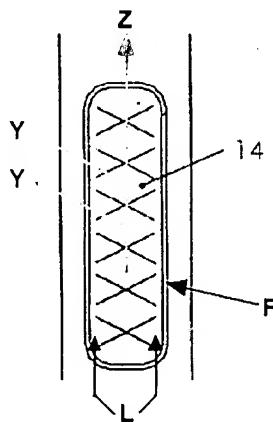
Regarding claim 1, Seven S.P.A discloses a bladder for use with a strap to carry a load comprising a plurality of transverse chambers (14, Figure 2) each having a longitudinal axis extending substantially parallel to the longitudinal axis of the other transverse chambers, wherein the longitudinal axis of each transverse chamber is disposed at an acute angle with respect to a longitudinal axis of the bladder. The bladder of Seven S.P.A does not include two longitudinal chambers to which the transverse chambers are connected in fluid communication at their ends.

Like Seven S.P.A, Mizen also discloses a bladder for use in a strap, the bladder comprising a series of chambers. Mizen further teaches that the chambers are in fluid

Art Unit: 3782

communication with one another via gaps (3) so that air could freely transfer between chambers when the strap is in use in order to spread the load throughout the bladder's length and width ([0006]). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include gaps in the bladder of Seven S.P.A, as taught by Mizen, so that the fluid in the chambers of Seven S.P.A could transfer between compartments in order to compensate for various stresses and pressures applied to the bladder when in use and to spread the load of these forces throughout the bladder.

By forming gaps in the ends of the chambers (14) of Seven S.P.A as shown in the figure below, two longitudinal chambers (L, below) are effectively formed along the length of the bladder, wherein each transverse chamber is in fluid communication with both of the longitudinal chambers, each transverse chamber has a longitudinal axis (Y, below) parallel to the longitudinal axis of the other transverse chambers, and wherein the longitudinal axis (Y, below) of each transverse chamber is disposed at an acute angle with respect to a longitudinal axis (Z, below) of the bladder.



Regarding claim 2, the modified Seven S.P.A bladder includes a flange portion (F, above) surrounding the first and second longitudinal chambers.

6. Claims 1-4, 9-12, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Preiss (US 6,644,522 B2) in view of Seven S.P.A and Mizen as applied in paragraph 5 above.

Regarding claims 1, 2 and 3, Preiss discloses a bladder (503) for use with a strap to carry a load comprising a flange portion (501) surrounding the bladder and two elongate flange apertures (angled gaps in 506,506') formed parallel to one another in the flange portion proximate ends of the bladder. Preiss does not disclose the particulars of the claimed bladder, namely two longitudinal chambers and a series of transverse chambers, where the transverse chambers are in fluid communication with the longitudinal chambers and where the transverse chambers each have an axis acutely angled with respect to an axis of the bladder. The modified Seven S.P.A bladder, however, does include these particulars of the claimed bladder as set forth above. It would have been obvious to one having ordinary skill in the art at the time the invention was made to replace the chamber structure of Preiss with the chamber structure of the modified Seven S.P.A bladder, since either chamber structure is an effective means for providing padding or cushioning in a shoulder strap. Each bladder includes a series of networked chambers for evenly distributing a load over a contact region of a user's body.

Regarding claim 4, the flange apertures (angled gaps in 506,506') of Preiss each have a longitudinal axis disposed at an acute angle with respect to a longitudinal axis of the bladder.

Regarding claim 9, the modified Preiss device set forth above includes the claimed features including a pad (500) having a central aperture formed therein into which a fluid-filled bladder with angled chambers (the modified Seven S.P.A bladder) is inserted and a length of webbing slidably connected to first and second ends (506,506') of the pad.

Regarding claim 10, the modified Preiss device has a bladder (the modified Seven S.P.A bladder) that includes the claimed features as set forth above.

Regarding claims 11 and 12, the bladder of the modified Preiss device is secured by a sealing edge (363) that is attached to frame (501) of the pad. This sealing edge can be considered a flange portion surrounding the chambers of the bladder that is secured to the pad.

Regarding claims 14 and 15, the modified Preiss device includes the claimed flange apertures as set forth above.

7. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Preiss in view of Seven S.P.A and Mizen as applied in paragraph 6 above, and further in view of Schroeder (US 4,094,014 A).

The modified Preiss strap pad includes the claimed features except the rubber bladder (col. 3 lines 57-60) is secured to the pad using glue rather than being sewn thereto. Schroeder, however, while generally concerned with gloves, teaches that when

attaching a rubber pad to another surface, glue and stitches are both effective attaching means (col. 2 lines 27-30). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use stitching, as taught by Schroeder, in place of the glue used by Preiss for attaching the rubber bladder to the pad, since it is known in the art that both glue and stitches are equivalent attachment means.

8. Claims 9 and 22 rejected under 35 U.S.C. 103(a) as being unpatentable over Weintraub (US 5,566,871 A) in view of Seven S.P.A and Mizen as applied in paragraph 5 above.

Regarding claim 9, Weintraub discloses a strap for a device carrying a load comprising, in combination, a pad (10) having a central aperture formed therein, a fluid-filled bladder (20/24) positioned within the central aperture and secured to the pad, and a length of webbing (12) slidably connected to first and second ends of the pad. The bladder (20/24) of Weintraub does not include the particulars of the claimed bladder, namely two longitudinal chambers and a series of transverse chambers, where the transverse chambers are in fluid communication with the longitudinal chambers and where the transverse chambers each have an axis acutely angled with respect to an axis of the bladder. The modified Seven S.P.A bladder, however, does include these particulars of the claimed bladder as set forth above. It would have been obvious to one having ordinary skill in the art at the time the invention was made to replace the bladder of Weintraub with the modified Seven S.P.A bladder, since either bladder is an effective means for providing padding or cushioning in a shoulder strap. The modified Seven S.P.A bladder includes a series of networked chambers for evenly distributing a load



Art Unit: 3782

over a contact region of a user's body, a feature that the original Weintraub bladder lacked.

Regarding claim 22, Weintraub discloses a layer of compressible material (18) positioned adjacent the bladder.

***Allowable Subject Matter***

9. Claim 23 is allowed.

10. Claims 5, 6, and 16-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

11. Applicant's arguments filed 10/31/06 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin M. Larson whose telephone number is (571) 272-8649. The examiner can normally be reached on Monday - Thursday, 7am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Newhouse can be reached on (571) 272-4544. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
NATHAN J. NEWHOUSE  
SUPERVISORY PATENT EXAMINER

JML  
1/11/07